



*#5/Supp IDS*  
*4-23-03*  
*C. Moore*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Vlad J. Novotny, Yee-Chung Fu and Zuo Wang  
Assignee: Active Optical Networks, Inc.  
Title: "Micro-Electro-Mechanical Variable Optical Attenuator"  
Serial No.: 10/010,786 Filed: 11/09/2001  
Examiner: Valencia, Daniel E. Tel: 703-305-4399  
Docket No.: 13441-002001 Art Unit: 2874

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Commissioner For Patents  
Washington, D.C. 20231

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §1.56, §1.97 and §1.98, Applicants bring the 31 documents listed on the enclosed form PTO-1449 to the Examiner's attention in the above-captioned application. Citation of the listed documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant application;
2. a representation that a search has been made; or
3. an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b).

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Box DD, Commissioner for Patents, Washington, D.C. 20231.

4/15/03  
Date

*Laurie Moreno*  
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Respectfully submitted,

*Arthur J. Behiel*

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Attorney for Applicants  
Reg. No. 39,603

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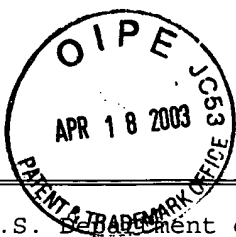
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U.S. Department of Commerce, Patent and Trademark Office	Serial No.: 10/010,786
	Filing Date: 11/09/2001
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Inventors: Novotny, et al.
"MICRO-ELECTRO-MECHANICAL VARIABLE OPTICAL ATTENUATOR"	Group Art Unit: 2874
	Examiner Name: Valencia, Daniel E.
	Attorney Docket No.: 13441-002001

## U.S. Patent Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date, If Appropriate
	AA	6,301,403 B1	10/09/01	Heanue et al.	385	18	
	AB	6,253,001 B1	06/26/01	Storrs T. Hoen	385	17	
DV	AC	6,028,689	02/22/00	Michalicek et al.	359	224	
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DV	AE	6,283,601 B1	09/04/01	Hagelin et al.	359	871	

## Foreign Patent Documents

		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	AF						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

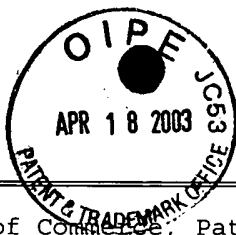
AG	"ROUTING PACKETS WITH LIGHT," Daniel J. Blumenthal. Scientific American, pages 96-99. January 2001.
AH	"Construction and performance of a 576x576 single-stage OXC," Herzel Laor. LEOS, San Francisco, California, 3 pages. November 8, 1999.
AI	"Application of micro- and nanotechnologies for the fabrication of optical devices," Wolfgang Ehrfeld and Hans-Dieter Bauer. SPIE Vol. 3276, page 2 and pages 4-14.
AJ	"PERFORMANCE OF A 576x576 OPTICAL CROSS CONNECT," Laor, et al. NFOEC, Chicago, Illinois, pages 1-5. September 26, 1999.
AK	"Control and shape design of an electrically-damped comb drive for digital switches," Yijian Chen. Proceedings of SPIE Vol. 4118, 2000. Pages 387-394.

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

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AL						

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	Document Number	Date	Country	Class	Subclass	Translation
						Yes No
AM						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AN	"THE RISE OF OPTICAL SWITCHING," David J. Bishop et al. Scientific American, pages 88-94. January 2001.
AO	"A LARGE-DEFLECTION ELECTROSTATIC ACTUATOR FOR OPTICAL SWITCHING APPLICATIONS," John D. Grade, Hal Jerman and Thomas W. Kenny. Presented at Hilton Head, 2000. 4 pages.
AP	"FLIP CHIP CHALLENGES," Steve Bezuk, PH.D. General Manager, Applied Technology Development and Flip Chip Kyocera America, Inc. First published in HDI Magazine, February 2000. 6 pages.
AQ	"MEMS Feedback Control Using Through-Wafer Optical Device Monitoring," J.M. Dawson, et al. Proceedings of SPIE Vol. 4178, 2000. Pages 221-227.
AR	"A FLAT HIGH-FREQUENCY SCANNING MICROMIRROR," Robert A. Conant, et al. 2000 Solid-State Sensor & Act Workshop, Hilton Head, S.C., June 4-8, 2000.
AS	"The Surface/Bulk Micromachining (SBM) Process: A New Method for Fabricating Released MEMS in Single Crystal Silicon," Sangwoo Lee, et al. Journal of Microelectromechanical Systems, Vol. 8, No. 4, December 1999. Pages 409-416.
AT	"MEMS actuators for silicon micro-optical elements," Norman T. Tien and Daniel T. McCormick. Proceedings of SPIE Vol. 4178, 2000. Pages 56-67.

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U.S. Patent Documents

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DV	AU	5,724,123	03/03/98	Tanaka	356	5.01	
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							Yes	No
	AY							

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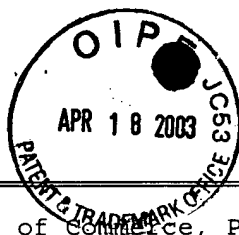
AZ	"Lightweight, Optically Flat Micromirrors for Fast Beam Steering," Jocelyn T. Nee, et al. Presented at IEEE/LEOS Optical MEMS 2000 Conference, August 21-4, 2000, Kauai, Hawaii, USA. 2 pages.
BA	"Optical MEMS for Optical Communications - Trends and Developments," Veljko Milanovic. Adriatic Research Institute. Pages 2-6. Downloaded December 20, 2001.
BB	"Silicon micromachines for lightwave networks: the little machines that will make it big," by David Bishop. December 2000. SPIE's Optics & Information Systems. 8 pages.
BC	Topical Review "The future of MEMS in telecommunications networks," James A. Walker. J. Micromech, Microeng.10(2000)R1-R7. Printed in the UK.
BD	D.J. Bishop Presentation, "Silicon Micromachines for Lightwave Networks: Can Little Machines Make it Big?" Lucent Technologies, Bell Labs Innovations. 83 pages. February, 1999.

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DV	BG	6,173,105 B1	01/09/01	Aksyuk et al.	385	140	
	BH						

Foreign Patent Documents

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	BI							

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	BJ	"Fiber coupling (1 x 2 beam splitter)." Development Editor: Marleen Madou; Publisher: Ron Powers; Project Editor: Paul Gottehrer; and Cover Design: Denise Craig. 1997 by CRC Press LLC. 4 pages.
	BK	United States Patent Application Publication, "Latching Apparatus for a MEMS Optical Switch," by Zhang et al. Pub. No.: US 2002/0172452 A1, Pub. Date: November 21, 2002. Appl. No.: 09/860,300, filed May 18, 2001.
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	BM	
	BN	

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